



# Space Day: Prospecting for Knowledge

## 12-Wright Flyer – Teacher Page

**Purpose:** To investigate the engineering issues involved when constructing a "flying machine".

### Materials needed:

- 8 inch paper plate
- cement frosting
- popsicle stick
- 3 graham crackers
- about a dozen pretzel sticks

**Cement icing:** (Enough for 6-8 models.) With an electric mixer, beat together until foamy 2 egg whites, 2 teaspoons water, and 1/8 teaspoon cream of tartar. Gradually add 3 cups sifted powdered sugar, beating constantly until stiff. Store in airtight container until used.

**Background:** There are many famous firsts in aviation history. One of these was the work of Orville and Wilbur Wright. They built the Wright Flyer. Orville was the first to fly the plane at Kill Devil Hill in North Carolina on December 17, 1903. This was the very first flight of a powered airplane. The flight lasted twelve seconds and the plane flew 120 feet.

**This activity:** Using graham crackers, pretzels, and cement frosting, students will construct a model of the 1903 Wright Flyer.

**Preparation:** Cement frosting will need to be prepared in advance and stored in an airtight container. Very "thick" frosting works best. Inexpensive paper plates are appropriate for this activity. A sample should be prepared in advance for students to view.

**In class:** Each child will need: a paper plate, container of frosting, popsicle stick for spreading the frosting, graham crackers, and pretzels.

**Reference:** Young Astronaut Council, The Adventure Series, 1990.



# Space Day: Prospecting for Knowledge

## 12-Wright Flyer - Student Page

### Materials needed:

- 8 inch paper plate
- cement frosting
- popsicle stick
- 3 graham crackers
- about a dozen pretzel sticks

### Procedure:

1. Collect all needed materials.
2. Looking at a completed model of the Wright Flyer, use the materials to build a model of your own.